Q: Okay, I see.

A: It was a fascinating time, because we also at that time initiated the levee projects, the agricultural levee projects, along the Missouri River from Rulo all the way down to the junction with the Mississippi River. These levees were a project in themselves, and of course, it called for a great deal of relationship to the farmers and agriculturists on both sides because they were largely for the protection of farmland. When the Missouri River flooded it used to flood the whole area, you know, and also the Missouri River, like the Mississippi, is a wild river. And it made its own new channel, and a large part of our effort on the Missouri was a continuation of something that had started years before, and that is maintaining the channel in the position that it was. You do that by armoring the banks and putting out dikes and redirecting the current.

Q: How were your relations with the Soil Conservation Service? You must've had to deal with them quite a bit.

A: That came up a little later, I think more in MRD than in Kansas City, because the Soil Conservation Service were just getting their teeth in the act. They had a job of selling to do with farmers, as you well know.

Q: In April 1948 you became the Alaska District Engineer?

A: Yes.

Q: Did you find that there was a housing problem in Anchorage when you moved up there?

A: No, I was housed on the post at Fort Richardson.

Q: How about for the staff itself? Was there a problem--do you know of any problems finding housing?

A: No, I think most of them lived somewhere in the area--right close to the area around--I don't think they were around the post, though. See, that was an Air Force base, really, with a small Army

detachment there. General Scott was up there at the time, Stanley Scott as chief engineer.

I think it was interesting how I happened to go up there. At the end of the war the military command in Alaska started to plan for the future, and at that time the strategic plan contemplated that the Russians would come over the chain, the Aleutian chain, and a large part of the construction was all designed to follow that particular precept. Sometime, a year or so after that, started right after the war, the strategists decided that the defense had to be over the pole, which caused the reorientation not only of installations but also of staffing and the kinds of troops and air forces that'd be up there. The Alaska District got in very severe problems because, as you well remember, during the war you had to get things done, and you did things, and the hell with everything else. And the mental philosophy of the District at that time was that they would build on that basis, and as a result their accounts and their costs--well, their accounts were not believable and their costs were out of line. And, this so disturbed the Congress that they did not make any appropriation for Alaska in the year that I went up there, and there was over $100 million of work under way.

There was a large engineering outfit up there at that time that had charge of all engineering, supervision of construction and so on, very prestigious top-drawer Boston firm by the name of Fay, Spofford, and Thorndike. The construction was done by a group of four contractors mostly from the Northwest, that had been put together in sort of a consortium. They had large camps--all labor was imported, because there wasn't enough labor in Alaska, of course. These large camps were a complete barracks-type housing in effect, no families in them, but mess halls and all that sort of stuff, and they existed not only in Anchorage but up at Nome, or Fairbanks, rather, and maybe one other place. There were foundations built and walls partially up and apartments started and not finished for military housing, and a whole group of important projects that had been started and stopped because there was no money. My predecessor, a pretty smart guy, being given the job of rushing this construction through so that the

military could start to staff the things that were needed, had a brilliant thought of getting surplus military property from the Pacific, from the Aleutian chain, and from elsewhere. The war being over, bulldozers and Barber Greens [road pavers] and trucks and supplies and lumber were all available, spread all over these places, and he sent a couple ships out to pick up all these surplus supplies.

Unfortunately, the manifests of the ships that came did not necessarily say what was in the hulls of these ships, and I've always had the feeling that the supply officers of the various places where things were picked up knew what their shortages were. And they not only put the excess supplies in, but all their shortages, which didn't exist. And, when I went up there there was a terrible hodgepodge of materials. Oh, I remember going through one warehouse, and there were about ten tons of lead in there, lead ingots, and of no use whatsoever because nobody made babbitt metal anymore. Did during the war, but normally your bearings were already made, and you bought 'em as bearings. But, I had field after field after field of very important construction equipment, but the inventory didn't say what was there. It had to be reinventoried.

We also had to plan on what we would do with monies that were going to be made available to the extent of maybe, oh, I forget exactly, but maybe $30, $40, $50 million. So, priorities had to be made to spend the monies where the military wanted it first spent. Among the places were four huge barracks there at Fort Richardson. Improvements, lengthening of the runway at Fairbanks Air Base, civilian housing, fire departments, a great many other things. There really was no lack of housing existing at that time for people at work, because during the war Alaska was well established militarily, and there were large forces up there, and those large forces included a lot of civilian people, but they were not top-drawer. Fortunately, we didn't have the high prices of oil in those days, and heating was not the greatest problem in the world, but we worked out--developed a plan with General [Nathan F.] Twining's staff. He was chief of the Alaska command. And, developed plans and specifications for completing these buildings, and to each one of

the specifications we attached a list of equipment that would be available for the contractor, so that he wouldn't have to bring it from the states.

And, we maintained this equipment, brought it up to date, established the fact that it was in top-drawer condition, and then I took the program and visited four cities in the United States under the aegis of the Association of General Contractors, held large meetings and told them I wanted to come up and bid, because everything else before that had been force account with these four contractors. And, believe it or not, we got good bids from firms all over the United States, and the consortium members, I think, bid on a couple of the projects themselves, but that way of life was established, and I used to go down to Seattle about once a month and open bids on the projects that were to be opened in those days, and things started to boom, and we also reorganized the housing entity and cut their rates to beat the dickens.

Q: So, the earlier system was the cost plus fixed fee?

A: Yes, mostly. Which is a nice way of life.

Q: Yes, for the contractor.

A: For the contractor. But, it takes enormous supervision, and when you get people to put in fixed bids, they're their own supervisors as far as costs are concerned.

Q: Right. You've mentioned it already, but let me ask you to expand upon it a bit, perhaps. The relationship between the Engineers and the Alaskan command seemed to be a fairly cooperative relationship?

A: General Twining told me I was his chief engineer. Now, General Scott, as you know, was an engineer officer, and he did have--there were engineers on the staff of General Twining. But as far as construction and getting things done, he said, "You're the guy I count on."

Q: So, who was actually determining the military construction program? That would've been you?

A: They determined what they needed, and then it was up to the Corps to support it before the Congress.

Q: I see. Did you have the opportunity to give them recommendations?

A: Oh, yes. We were close. I used to go on trips with him. He was quite a camera hunter.

Q: Camera hunter?

A: Well, he'd go out after Kodiak bears with a camera, you know. That sort of thing. But the reestablishment of peacetime discipline among the people in the armed forces, and also the reestablishment of financial discipline in the Corps, recovering from the World War policies of get-things-done-the-hell-with-the-costs, you know, took a little establishing.

Q: Did you have any particular supply problems in Alaska, getting stuff from the continental United States?

A: Well, my predecessor established a real fine situation. We brought all of the vitally necessary and short supply things for construction from Seattle by air, and that also included frozen milk and vegetables and all that sort of thing. I mean, Alaska was horrendously expensive to live in. A loaf of bread in those days was $1.00. 'Course, it's one dollar today! But, at that time it was 15 cents here in the states, and you lived on frozen milk that came up in cartons, and all that sort of thing, you know, and you reconstituted it, sometimes successfully.

Q: Was Fort Richardson one of your major projects, building that fort?

A: While I was still there--I was there a year to the day. One year to the day. And, we had just started--the plans had already been developed, but started Fort Richardson, which in theory had been a part of Elmendorf--before that I guess the proper name was Elmendorf, and we started the building of Fort Richardson about the time that I was leaving.

Q: Any particular problems with building?

A: Well, you always have a serious problem in Alaska, and that is with permafrost. And, you have to protect the permafrost. You just can't build on top of it, because it'll melt, and then your building will sink, and you're in a hell of a situation.

Q: Were you getting any help in meeting those kinds of problems from the Cold Regions Laboratory, which I guess had just been started?

A: A lot of our material, I found out, our Engineers had already got a lot of material from the Soviets. They had done a lot of work on permafrost. But, we had during the war discovered the problems of permafrost in protecting it by stilting your houses where you had it. One of the funny things was as a result there's a lot of groundcover up there, trees and forests and that sort of stuff, but they're all shallow rooted, so they'll root in the part that isn't permafrost and then spread out, and I have some movies of Mrs. Potter pulling up our Christmas tree! Again, it was an experience. I had two daughters that were, oh, let's see, this was in '48, and they were ten and nine years old. Even took a dog up with us.

Q: Did you also work on what was called the Mile 26 Project near Fairbanks? This was evidently an extension of a runway for B-36 operations. Do you recall anything about that?

A: No. We had to do with the operation of the oil line that came from White Horse. There's an oil line that came from there and went down to the coast, two or three oil lines, six and four inch, I guess, and those were a principal supply of fuel for the air bases.

Q: Were those built below ground or above ground?

A: Most of them I think were above ground.

Q: Because of the permafrost problem again?

A: Yes. The pump stations gave some problem, but really not. The system worked very well. I remember once going down to White Horse to look over the main station there and had to stay there for three days because it was so cold the airplanes couldn't get off the ground.

Q: Were there any problems in advertising for bids while you were up there?

A: I advertised widely in the United States, very widely, from New York to San Francisco.

Q: Was this atypical? Would most Districts or Divisions do that?

A: I think even in those days your advertisements went in the technical magazines and the professional magazines, but I would make sure they were damn well known, and I would advertise the opening in Seattle. Went down once a month, as I said.

Q: Were there any other experiences in Alaska that you would like to mention?

A: Well, on my last day there, for some reason or other, I took a flight and went up above the Arctic Circle and landed in a little old Eskimo village, on the ice, by the way, on the ocean ice, from where you could see across to Russia, and the Eskimos were celebrating to beat the dickens because they'd caught their first whale in a long time. They had it by the tail and they were pulling it up and gradually butchering it and throwing it over in the snowbanks to freeze, and beating the dogs off. It's the only time I got above the Arctic Circle. I was too darn busy to get up where tourists might go. It was a fascinating life, though. We have lots of movies of it.

Q: Was your staff as large a staff as most District staffs, or was it a smaller staff than most?

A: It was large enough, because you see before that Fay, Spofford, and Thorndike had been the staff. By the time I left I think they were in charge of surveying or more or less those jobs, but I had an excellent chief engineer and a good staff under him, and we had to develop a competent financial staff. The men were there, but setting up the systems was a problem. We were building, I think, 54 apartment buildings up at Fairbanks, and the costs that accrued to each one of those was so varying, one would be almost finished for so many dollars a square foot and another one would be barely started, and its cost per square foot was

already greater. The system of accounting, which the Congress demanded on that sort of thing. So, what I did was take all the costs that had accrued to the whole darn project and divided them among the 54 and then allocated them according to completion, and that way they all finished at the same dollar amount! Well, it had to be done, and we were also running a lumber mill down the coast of Alaska farther away, which I did away with.

Q: You closed the lumber mill?

A: Yes, the District was running this lumber mill down there.

Q: The District?

A: You had to have lots of lumber during the war, you know, and there was a lot of hemlock and that kind of tree in that area, and they were sawing trees and lumbering like nobody's business. When I got there we had some 20 million feet of lumber in storage over in Fairbanks.

Q: Did the District actually build that lumber mill?

A: I think so. I don't know what happened to it. I stopped it after awhile, but what happened to it after that I don't know. Oh, during the war those District Engineers were pretty darn competent guys about getting things done. It'd been put in the proper place where there was a big supply of lumber, and in those days you didn't have environmentalists telling you you couldn't cut the trees down. Who owned the land? I think the government did, I suppose, I don't know.

Q: In April 1949 you were appointed Acting Assistant Chief of Engineers for Civil Works. I know we've already touched upon this, but can you go over how you received this appointment?

A: Well, it goes back to the time when I was in the Kansas City District, and General Pick came back from Burma. He had started all the major works on the Missouri River. You've heard of the Pick-Sloan plan, which was the plan for the development of the Missouri River; Pick being the Engineer and [William G.] Sloan being Bureau of Reclamation.